

Professional and Managerial Branch  
Engineering Group  
Engineer Series

CHIEF SANITARY DESIGN ENGINEER

3/03 (AM)

### **General Purpose**

Under general direction, manage water and wastewater treatment plant design and construction engineering projects and provide technical support to operation.

### **Typical Duties**

Plan, direct and participate in water and wastewater facility design. Involves: Develop design criteria and set parameters for preparation of complex water production facilities, water treatment plant improvement, wastewater treatment systems and facilities, and odor control improvement construction plans and specifications. Review construction designs to ensure they are functional, practical and economical and construction project plans and specifications to ensure they conform to operational requirements. Serve as consultant to plant operations staff to investigate and propose solutions for unusual plant equipment, structure or process problems.

Coordinate complex water and wastewater treatment construction plant projects as assigned. Involves: Review treatment plant Collaborate with consultants, operating divisions, engineering division, state and federal regulatory agencies, and contractor on plant construction and project change orders. Verify that projects satisfy complex environmental and public health regulations, are in accordance with applicable permits, and comply with state or federal funding requirements. Make field decisions to resolve construction conflicts. Ensure that construction projects are built within the allotted time frame and budget. Assist plant staff during start-up and check-out of facilities.

Provide staff and technical assistance, and perform administrative duties. Involves: Assist Engineering Services Manager in preparation of long range water production and purification and wastewater treatment facilities capital improvement programs. Prepare and submit technical reports with scope of problem and recommendations. Requisition supplies, material and equipment. Develop requests for proposals, participate in consultant selection committee and negotiate engineering contracts. Train or give professional advice to engineering and plant personnel as necessary.

Supervise assigned personnel. Involves: Schedule, assign, instruct, guide, check and evaluate work. Arrange for or engage in employee training and development. Enforce personnel rules and regulations, standards of conduct, work attendance, and safe working practices. Ensure adherence to applicable regulatory and departmental standards Counsel, motivate and maintain harmonious working relationships among subordinates. Recommend staffing and employee status changes. Interview applicants and recommend selection.

Perform related incidental professional engineering duties contributing to the realization of unit or team objectives as required. Includes: Substitute for supervisor, coworkers or subordinates as qualified and within authorized limits by carrying out specified functions to maintain continuity of ordinary operations, if delegated. Develop and implement goals, objectives and budgets related to assigned area engineering activities, as directed. Represent the Water Utilities at public hearings and meetings. Serve on ad hoc committees. Maintain activity records and prepare status and results reports.

### **Knowledge, Abilities and Skills**

- Comprehensive knowledge of Civil Engineering principles and practices related to water and wastewater plant design and operation.
- Comprehensive knowledge of water utilities construction and inspection methods, materials, tools and equipment.
- Comprehensive knowledge of chemical and biological aspects of water and wastewater treatment controls processes, and pumping systems.
- Comprehensive knowledge of cost determination techniques.
- Comprehensive knowledge of Environmental Protection Agency (E.P.A.) and other regulatory agencies water and wastewater treatment standards and requirements.
- Considerable knowledge of administrative procedures related to managing large construction projects.
- Considerable knowledge of safe working practices.
- Ability to plan, direct, train, instruct, review and evaluate the work of assigned employees in various plant and laboratory operations.

- Ability to firmly and impartially exercise delegate supervisory authority to enforce personnel rules and regulations, standards of conduct and work attendance, and safe working practices.
- Ability to establish and maintain effective relationships with employees, officials, contractors and the public.
- Ability to make sound decisions.
- Ability to express oneself clearly and concisely, orally and in writing in order to maintain records, prepare reports and conduct public meetings.
- Skill in the safe operation and care of a personal computer or network workstation, including computer aided drafting and design (CADD) software.
- Skill in the safe operation and care of a motor vehicle.

***Other Job Characteristics***

- Occasional work in a field environment which includes traversing uneven terrain to oversee and inspect construction in progress.
- Occasional exposure to adverse weather conditions.
- Occasional exposure to unpleasant odors.
- Occasional driving through city traffic.

***Minimum Qualifications***

Education and Experience: Equivalent to a combination of an accredited Bachelor's Degree in Civil or Sanitary Engineering or related engineering discipline and eight (8) years of civil or sanitary engineering experience in the design or operations of large water or wastewater facilities (e.g. capacities of at least ten million gallons per day) with pump stations and treatment plants, including either four (4) years managing a large water or wastewater plant operation or in a supervisory capacity as project manager responsible for large plant projects, and that involved cooperative relationship with regulatory agencies.

Licenses and Certificates: Registration as Professional Engineer in the State of Texas or a state having a reciprocal agreement at time of appointment. Registration as Professional Engineer in Texas within one (1) year of appointment. Texas Class "C" Driver's License or equivalent license issued by another state.

Special Requirements: Subject to on-call during non-working hours and mandatory recall during periods of water utility emergency operations.

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Human Resources Director

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Department Head